

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kota IWAMOTO

Title: IMAGE SIMILARITY CALCULATION SYSTEM, IMAGE SEARCH
SYSTEM, IMAGE SIMILARITY CALCULATION METHOD, AND IMAGE
SIMILARITY CALCULATION PROGRAM

Appl. No.: 10/567,561

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Examiner: Woldemariam, Akililu K.

Art Unit: 2624

Confirmation Number: 6623

REQUEST FOR CORRECTED NOTICE OF ALLOWABILITY
REGARD ACKNOWLEDGEMENT OF PRIORITY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Supplemental Notice of Allowability, dated April 11, 2011, Applicant requests the Examiner acknowledge foreign priority. Enclosed is a copy of the first two pages of the Publication and Form PCT/IB/304. A certified copy of the priority document should have been received in this national stage application from the International Bureau. We therefore request acknowledgment of the copy of the priority document received in the above-mentioned application.

Please note that under PCT Rule 17.2(a), the USPTO is not allowed to request a copy from the applicant.

Respectfully submitted,

Date May 20, 2011

By 

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(19) 世界知的所有権機関
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2005 年 9 月 15 日 (15.09.2005)

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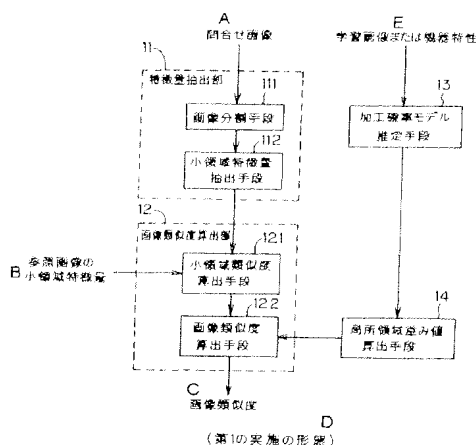
(10) 国際公開番号
WO 2005/086092 A1

- (51) 国際特許分類⁷: G06T 7/00, G06F 17/30, G06N 3/00 (71) 出願人 (米国を除く全ての指定国について): 日本電気株式会社 (NEC CORPORATION) [JP/JP]; 〒1080014 東京都港区芝五丁目 7 番 1 号 Tokyo (JP).
- (21) 国際出願番号: PCT/JP2005/003468
- (22) 国際出願日: 2005 年 3 月 2 日 (02.03.2005) (72) 発明者; および
- (25) 国際出願の言語: 日本語 (75) 発明者/出願人 (米国についてのみ): 岩元 浩太 (IWAMOTO, Kota) [JP/JP]; 〒1080014 東京都港区芝五丁目 7 番 1 号 日本電気株式会社内 Tokyo (JP).
- (26) 国際公開の言語: 日本語
- (30) 優先権データ: (74) 代理人: 山下 穰平 (YAMASHITA, Johei); 〒1050001 東京都港区虎ノ門五丁目 1 3 番 1 号虎ノ門 4 O M T ビル 山下国際特許事務所 Tokyo (JP).
- 特願2004-059736 2004 年 3 月 3 日 (03.03.2004) JP

/ 続葉有 /

(54) Title: IMAGE SIMILARITY CALCULATION SYSTEM, IMAGE SEARCH SYSTEM, IMAGE SIMILARITY CALCULATION METHOD, AND IMAGE SIMILARITY CALCULATION PROGRAM

(54) 発明の名称: 画像類似度算出システム、画像検索システム、画像類似度算出方法および画像類似度算出用プログラム



(第1の実施の形態)

- A-QUERY IMAGE
B-REFERENCE IMAGE SMALL AREA CHARACTERISTIC AMOUNT
C- IMAGE SIMILARITY
D- (FIRST EMBODIMENT)
E-LEARNING IMAGE OR DEVICE CHARACTERISTIC
11-CHARACTERISTIC AMOUNT EXTRACTION UNIT
111- IMAGE DIVISION MEANS
112 -SMALL AREA CHARACTERISTIC AMOUNT EXTRACTION MEANS
12- IMAGE SIMILARITY CALCULATION UNIT
121 -SMALL AREA SIMILARITY CALCULATION MEANS
122 -IMAGE SIMILARITY CALCULATION MEANS
13-PROCESSING PROBABILITY MODEL ESTIMATION MEANS
14 -LOCAL AREA WEIGHT VALUE CALCULATION MEANS

(57) Abstract: There is provided an image similarity calculation system for calculating an image similarity between an image which has been subjected to processing and an original image. Local area weight value calculation means (14) calculates as a local area weight value a weight value for each image local area according to the probability of being subjected to processing for each image local area and outputs the calculated local area weight value to image similarity calculation means (122). A small area similarity calculation means (121) compares the characteristic amount of each small area obtained by dividing a query image to the characteristic amount of each small area obtained by dividing a reference image and calculates the similarity of characteristic amounts of each small area. The image similarity calculation means (122) calculates the image similarity between the query image and the reference

image by using the weight value for each small area obtained from the local area weight value inputted from the local area weight value calculation means (14) on the calculated similarity of the characteristic amounts for each small area.

(57) 要約: 加工処理が施された画像と元画像間の画像類似度を高い値として算出する画像類似度算出システムを提供する。局所領域重み値算出手段 14 は、画像の局所領域ごとに加工処理が施される確率にもとづいて画像の局所領域ごとの重み値を局所領域重み値として算出

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(81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:

— 国際調査報告書

(84) 指定国 (表示のない限り、全ての種類の広域保護が可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ,

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

し、算出された局所領域重み値を画像類似度算出手段122に出力する。小領域類似度算出手段121は、問合せ画像の分割された小領域ごとの特徴量と、参照画像の分割された小領域ごとの特徴量を比較して、各小領域ごとの特徴量の類似度を算出する。画像類似度算出手段122は、算出された各小領域ごとの特徴量の類似度に局所領域重み値算出手段14から入力される局所領域重み値から求められる小領域ごとの重み値を作用させて問合せ画像と参照画像の画像類似度を算出する。

PATENT COOPERATION TREATY

PCT/JP05/003468

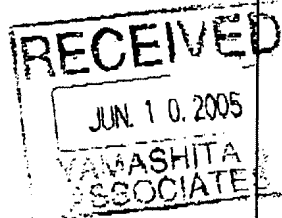
From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

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Date of mailing (day/month/year) 03 June 2005 (03.06.2005)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference IPY-179	
International application No. PCT/JP05/003468	International filing date (day/month/year) 02 March 2005 (02.03.2005)
International publication date (day/month/year)	Priority date (day/month/year) 03 March 2004 (03.03.2004)
Applicant NEC CORPORATION et al	

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable)* The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable)* An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
03 March 2004 (03.03.2004)	2004-059736	JP	31 March 2005 (31.03.2005)

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